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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TRAN, NHAN T

ART UNIT PAPER NUMBER

2615

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/459,574

Applicant(s)

SASAKI, GEN

Examiner

Nhan T. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 7/22/2004 & 4/28/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28 and 29 is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/28/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1 & 4 have been considered but are moot in view of the new ground of rejection.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 4/28/2004 was filed after the mailing date of the Office Action on 4/22/2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Matsumura (US 6,762,792).

Regarding claim 1, the Admitted Prior Art (Figs. 33 & 34) discloses an image processing circuit of an image input device which performs a predetermined image processing of image photographed by an image pickup device (CCD 1) in said image input device, said circuit comprising:

a real time processing unit (RPU 2b) in which a predetermined general image processing including at least pixel interpolation of a pixel data being photographed by said image pickup device and inputted sequentially is performed by real time processing in which an intermediate image is not stored in a main memory (memory 4) until a final display image is prepared (see Specification, page 1, lines 9-19);

a main memory (memory 4) that stores a pixel data outputted from at least said real time processing unit, in image frame units (Fig. 34);

a central control unit (CPU 2a) in which with respect to image temporarily stored in said main memory, exceptional image processing (JPEG compression) except for said general image processing is executed as a software program processing, and then stored in said main memory (in temporary storage data buffer of memory 4), characterized in that: said real time processing unit inherently has at least a selector for selecting said pixel data being photographed by said image pickup device and inputted subsequently, and said pixel data of image temporarily stored in said main memory (see Fig. 34 and page 1, line 20 – page 2, line 2). *It is noted that the RPU 2b must have a selector for selecting pixel data being photographed by the image pickup device and inputted sequentially in order for the system to function properly.*

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The Admitted Prior Art fails to explicitly disclose that the real time processing unit prepares a display image data using a line memory. However, it is well known that a line memory is used for processing (i.e., interpolating) of pixel data for displaying as taught by Matsumura in Fig. 1; col. 10, lines 10-20.

Therefore, it would have been obvious to one of ordinary skill in the art to recognize that a line memory would be used for interpolating pixel data for real time displaying purpose in a well-known fashion.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art and Matsumura as applied to claim 1 above and in further view of Hidari (US 5,905,533).

Regarding claim 4, the Admitted Prior Art and Matsumura fail to disclose repetitive inputs from a main memory to the real time processing unit. Hidari teaches an image processing unit that is implemented with a circulative addition circuitry to perform addition by circulating pixel data output from a memory over and over again to reduce noise contained in pixel data (col. 8, line 44 – col. 9, line 15). As the number of times of circulative addition increases, the degree of noise is decreased (Figs. 6-9).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the real time processing unit by including a circulative addition circuitry such that the pixel data inputted repetitively from the main memory to the real processing unit would be circulated by a number of times to reduce noise contained in the pixel data.

*Allowable Subject Matter*

5. Claims 2 & 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. *See the same reasons for allowance as provided below.*

6. Claims 28 & 29 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 28, the prior art of record fails to teach or fairly suggest the combination of all limitations required in claim 28 that includes "...said real time processing unit including a plurality of image processing blocks connected sequentially; a foremost stage image processing block configured to selectively receive said pixel data stored in said main memory through said selector; at least one of a second and later image processing blocks configured to selectively receive at least one of a pixel data from said foremost stage image processing block and the pixel data stored in said main memory through a predetermined other selector; a rearmost stage image processing block configured to send a first processed pixel data to said main memory; and at least one of an image processing block that precedes said the rearmost stage image processing block configured to send a second processed pixel data to both the succeeding image processing block and said main memory."

Regarding claim 29, the prior art of record also fails to teach or fairly suggest the combination of all limitations required in claim 29 that includes "...a timing generator

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configured to regulate operation timing of said real time processing unit and said image pickup device, said timing generator comprising: a synchronous controller configured to synchronously regulate operation timing of said real time processing unit and operation timing of said image pickup device when said selector selects the pixel data in the image photographed by said image pickup device; and an asynchronous controller configured to asynchronously regulate operation timing of said real time processing unit and operation timing of said image pickup device when said selector selects the pixel data stored in said main memory.”

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### *Conclusion*

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (703) 605-4246. The examiner can normally be reached on Monday - Thursday, 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.



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